

While BPL does fall under the charter of promoting broadband availability to all Americans, it is a fundamentally flawed means of achieving that end. It lacks the reliability and scalability of competing technologies, it costs at least as much as more effective data delivery technologies (eg wireless, DSL, cable modem), it offers the consumer no protection against interference from existing services operating on the same frequencies, and harms both domestic and international users of the radio spectrum.

As technology continues to progress, the need for higher speeds and high reliability communications will continue to increase. BPL is, by its very nature, a lossy, unprotected medium that must contend with more noise and attenuation than almost any other existing data conduit. It will not scale with other developing technologies and will soon find itself out-paced. It is a technological dead end that, in light of its costs and anti-social side-effects, should not be pursued.

To make BPL effective, high pass filters will need to be installed across all transformers between the producers and consumers. Further, repeaters will be required to compensate for the loss in signal strength and data integrity that an open wire carrier exhibits. While these devices in themselves may be inexpensive, the labor costs to carry out the installations will not be. Indeed, the labor cost will likely exceed the effective cost of the components by several orders of magnitude. If we are to bear the cost of installing devices at every utility line transformer, we should install devices that can support cleaner, higher efficiency data transmission. Existing high bandwidth conduits (twisted pair (telephone), coax (cable TV), and satellite TV/Internet) are already in reach of the majority of the population and cost far less to expand and improve.

Unlike twisted pair, coax, and microwave devices operating in protected spectrum, BPL is susceptible to interference from existing spectrum users. This can only lead to two conclusions: BPL consumers will be forced to live with the interference, which will ultimately lead them to choose more effective technologies, or BPL producers will find themselves in a technological arms race against incumbent users. The former is another strike against the deployment of inferior technology, and the latter is in direct violation of the FCC's greater charter, namely the management and protection of communications users and spectrum.

BPL generates noise throughout radio spectrum that is already allocated to existing services. While the proposed signal levels have traditionally been considered low, the incredibly wide field of deployment needed to make BPL function would have a considerable effect on the noise floor. Not only would existing, domestic users be affected, but due to the nature of the frequencies involved in many BPL technologies, weak signal systems world wide may be effected. While BPL providers may propose dynamic interference mitigation, such systems cannot effectively mitigate distant complaints and would, in almost all cases, require the system to detect local transmissions. While this may work for highly interactive two way systems, it does nothing to mitigate interference to receive only, low power, or low duty cycle communications.

There are no effective long term reasons to pursue this technology.